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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,567	11/21/2001	Tae-Sung Jung	678-775 (P10024)	2637
28249	7590	01/04/2005	EXAMINER	
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553			JOO, JOSHUA	
			ART UNIT	PAPER NUMBER
			2154	
DATE MAILED: 01/04/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,567

Applicant(s)

JUNG, TAE-SUNG

Examiner

Joshua Joo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/21/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 1-10 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

i) As per claim 4, there is no previous mention of "the data." Is "the data" referring to the registration reply of the home agent?

ii) As per claim 9, the claim states that "the second registration" is the message being send from mobile node to second GGSN (GFA). However, previously stated in Claim 7, "a second registration request" is send from the second GGSN to the first GGSN (GFA). Is the "the second registration" referring to just a registration request being send from the mobile node to the second GGSN and not the same registration request as mentioned in claim 7?

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gustafsson et al, "Mobile IP Regional Registration" published in July 13, 2000 from the Applicant's Information Disclosure Statement (Gustafsson hereinafter) and in view of Barnes et al, US Patent #6,711,147 (Barnes hereinafter).

6. As per claim 1, Gustafsson teaches an invention for using Mobile IP, where a mobile node registers with its home agent through a hierarchy of foreign agents. Gustafsson's invention comprises of:

A) Transmitting a location registration request from the mobile node to the first (foreign agent) FA, upon receiving information indicating that the first FA supports a foreign agent function and also receiving an Agent Advertisement message with an address of the second FA, said information and said Agent Advertisement message being transmitted by the first GGSN (Pg. 25. The mobile node sends a registration request to the closest foreign agent (FA). Pg. 7, Section 3.3. FA announces its presence through an Agent Advertisement message to the mobile node, where if the "I" bit is set, it contains the address of the Gateway Foreign Agent (GFA)),

B) Transmitting the location registration request from the first FA to the second FA (Pg 26. The FA sends the registration request to the GFA),

C) Registering by the second FA an address of the first FA to which the mobile node belongs, and then transmitting to the home agent the Location Information message indicating

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the address of the first FA to which the mobile node belongs (Pg 26. The GFA maintains a list entry of the address of the lower level FA. Page 8, Home registration request contains a care-of address. Pg. 3. The care-of address is the address assigned to a mobile node or to agent that offers connectivity to the mobile node. Pg 27. If there is only one level of hierarchy beneath the GFA, then the address of the FA is the care-of address. Pg 26. Registration request is send to the home agent.)

7. Gustafsson teaches the use of foreign agents and gateway foreign agents in a Mobile IP network. However, Gustafsson does not mention that the foreign agents and the gateway foreign agents are GGSNs, Gateway GPRS Support Node.

8. Barnes teaches an invention for using GPRS with Mobile IP, where GGSNs, which support packet data, are used as the gateways (Col 2, lines 45-53).

9. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Gustafsson by using GGSN as the agents as mentioned in Barnes invention because it would improve the capability of Gustafsson by providing packet based service which would allow the network to be compatible with the Internet. GPRS is packet based so it provides a faster transmission rate as well.

10. As per claim 2, Gustafsson teaches the method as claimed in claim 1, wherein the location registration request transmitted by the mobile node includes the address of the first GGSN to which the mobile node belongs. (Pg. 9. The mobile node sends a registration request to the foreign agent and the care-of address may contain the address of the foreign agent.)

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11. As per claim 3, Gustafsson teaches the method as claimed in claim 1, wherein the Agent Advertisement message is transmitted through a tunnel between the mobile node and first GGSN (Pg. 7, Section 3.3. FA sends an Agent Advertisement message, where the message indicates the domain supports tunnel management).

12. As per claim 4, Gustafsson teaches the method as claimed in claim 1, further comprising the steps of:

A) Determining by the home agent whether a destination address of the data is identical to the address of the second GGSN, upon receiving data destined for the mobile node from the correspondent node (Pg. 8, Section 3.4.1. The mobile node might set the care-of address as the GFA address in the registration request. If the care-of address is the GFA address, the home agent will then register the GFA address as the address of the mobile node. Pg. 29, Section B.3. When data is sent to the mobile node, the data arrives at the home agent, and home agent tunnels the traffic to the GFA.)

B) Transmitting the data to the second GGSN, if the destination address of the data is identical to the address of the second GGSN (Pg. 8, Section 3.4.1. The mobile node may use the GFA address as its care-of address and send information directly to the GFA without using a FA. Pg. 26-27. The home agent sends a registration reply to the GFA.)

13. As per claim 5, Gustafsson teaches the method as claimed in claim 4, further comprising the step of transmitting the data to the first GGSN from the home agent, if the destination address of the data is not identical to the address of the second GGSN. (Pg. 9, Section 3.4.2. If the care-of address of the registration request is not the GFA and is the address of the FA, the FA sends the message directly to the home agent. Also, if the care-of address is zero, the FA

adds an extension with its own address and sends the request to the GFA. Pg. 26. The GFA stores the address of the FA. When the home agent sends the registration reply to the GFA, the GFA checks its record and sends it to the FA. Pg. 7, Section 3.3. The Advertisement message send by the FA can indicate tunneling).

14. As per claim 6, Gustafsson teaches the method as claimed in claim 1, wherein the Location Information message includes the address of the first GGSN and the address of the second GGSN (Pg. 9-10. Section 3.4.2. The registration request contains the address of the GFA and the address of the FA.)

15. As per claim 7, Gustafsson teaches an invention for using Mobile IP, where a mobile node registers with its home agent through a hierarchy of foreign agents. Gustafsson's Invention comprises of:

A) Creating by the mobile node a tunnel and receiving through the created tunnel an Agent Advertisement message indicating whether a second foreign agent (FA) serves as the foreign agent or the gateway foreign agent, if the mobile node enters a region of the second FA (Pg. 12, Section 3.5. Mobile node moves from one foreign agent to another foreign agent. Mobile node receives an Agent advertisement message from the new foreign agent. The message indicates whether the advertised GFA is the same as the previously registered care-of address or a newly advertised FA. Pg. 7, Section 3.3. FA sends an Agent Advertisement message, where the message indicates the domain supports tunnel management).

B) Transmitting a first registration request message for requesting location registration from the mobile node to the second FA, if the second FA serves as the foreign

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agent (Pg. 12, Section 3.5. Mobile node issues a regional registration request to the new foreign agent).

C) Transmitting a second registration request message for requesting the location registration for the mobile node from the second FA to the first FA serving as the gateway foreign agent (Pg. 12, Section 3.5. Mobile node receives an Agent advertisement message from the new foreign agent that indicates whether the advertised GFA is the same as the previously registered care-of address. Pg. 14-15, Section 3.5.2. FA sends request to the indicated GFA. FA processes regional registration message according to the rules of processing a registration request message to the home agent.)

D) Transmitting a Location Information message indicating location information of the mobile node from the first FA to the home agent, upon receiving the second registration request message. (Pg. 9-10. Section 3.4.2. The registration request on the mobile node contains the address of the GFA. Pg. 26. The registration request is send to the home agent.)

16. Gustafsson teaches the use of foreign agents and gateway foreign agents in a Mobile IP network. However, Gustafsson does not mention that the foreign agents and the gateway foreign agents are GGSNs, Gateway GPRS Support Node.

17. Barnes teaches an invention for using GPRS with Mobile IP, where GGSNs, which support packet data, are used as the gateways (Col 2, lines 45-53).

18. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Gustafsson by using GGSN as the agents as mentioned in Barnes invention because it would improve the capability of Gustafsson by providing packet

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based service which would allow the network to be compatible with the Internet. GPRS is packet based so it provides a faster transmission rate as well.

19. Gustafsson does not specifically teach that the mobile node creates a tunnel, but Gustafsson does teach that the foreign agent sends an indication of whether the domain supports tunnel management. It would have been obvious to one of ordinary skill in the art that the nodes would want to establish a secure connection in transferring information across a network that might be insecure.

20. As per claim 8, Gustafsson teaches the method as claimed in claim 7, wherein the Location Information message includes an IP address of the first GGSN and an IP address of the second GGSN. (Pg. 9-10. Section 3.4.2. The registration request contains the address of the GFA and the address of the FA.)

21. As per claim 9, Gustafsson teaches the method as claimed in claim 7, further comprising the steps of:

A) Transmitting the second registration request message for requesting the location registration from the mobile node to the second GGSN, if the second GGSN serves as the gateway foreign agent (Pg. 25. The mobile node sends a registration request to the closest FA. Pg 26. The FA sends the registration request to the GFA),

B) Transmitting the Location Information message indicating the location information of the mobile node from the second GGSN to the home agent, upon receiving the first registration request message (Pg 26. Upon receiving a Registration request from the GA, the GFA sends a Registration request is send to the home agent. Pg. 8, Section 3.4.1. Registration request contains the care-of address of the mobile node).

22. As per claim 10, the method as claimed in claim 7, further comprising the step of, upon receiving data destined for the mobile node from the correspondent node after receiving the Location Information message, transmitting the received data from the home agent to the second GGSN to which the mobile node is currently connected (Pg. 26. The home agent receives the registration request. Pg. 27. Home agent responds by sending the registration reply to the GFA. Pg. 9-10. Section 3.4.2. The registration request on the mobile node contains the address of the GFA.)

Conclusion

23. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Regional Aware Foreign Agent (RAFA) for Fast Local Handoffs by S.F. Foo teaches an overview of the Mobile IP protocol.

24. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966 and fax number is 571 273-3966. The examiner can normally be reached on Monday to Thursday 8 to 5:30.


26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on 571 272-3964.

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27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 23, 2004

JJ

 JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
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